AMENDMENT TO THE SPECIFICATION

[006] As shown in FIG. 2, the flexure 18 provides a spring connection between the slider 20 and the load beam 16. Flexure 18 is configured such that ~~is~~ it allows the slider 20 to move in pitch and roll directions to compensate for fluctuations in the spinning surface of the disk 22. Many different types of flexures 18, also known as gimbals, are known to provide the spring connection allowing for pitch and roll movement of the slider 20 and can be used with the present invention.

[008] The density of concentric data tracks on magnetic disks continues to increase (i.e., the size of data tracks and radial spacing between data tracks are decreasing). ~~in~~ In addition, the linear density continues to increase, which in turn increases the ~~areal~~ area bit density in both directions and reduced the area per magnetic bet cell. As the area per bit cell is reduced, the number of grains or particles per bit cell is also reduced unless the grain size is also reduced. The signal-to-noise ~~ration~~ ratio is a function of the number of grains per bit cell, so as this density increases, it becomes more difficult to write data to the tracks without affecting adjacent tracks. One technique in the art for enabling precise data writing is to use thermally-assisted laser writing. This technique requires the presence of a thermal energy source, such as a light beam (e.g., a laser beam) at or near the location of the transducing head. This thermal energy source provides energy to the recording medium, which reduces the medium's coercivity to facilitate the write process.

BRIEF DESCRIPTION OF THE DRAWINGS

[016] FIG. 3A is a perspective view of a transducing head, according to another embodiment of the present invention.

After section **[016]** but before section **[017]**, please insert the following:

FIG. 3B is a sectional perspective view of a portion of a transducing head, according tone embodiment of the present invention.

[017] ~~FIGS. 4A and 4B show a top view and a sectional perspective view of a transducing head, according to one embodiment of the present invention~~ FIG 4. is a perspective view showing a transducing head according to another embodiment of the present invention.

DETAILED DESCRIPTION

[026] As shown in FIGS. 5A and 5B, a slider 104 includes a disk opposing face 110 and a top face 111 bounded by a leading face 112, a trailing face 114, and side faces 116 extending from the leading face 112 to the trailing face 114. The shape and contours of the disk opposing face 110 determine the flying characteristics of the slider 104. The slider 104 must maintain adequate roll, pitch, and normal stiffness over the concentric data tracks of the recording medium. FIGS. 5A and 5B further show the location of the transducing head ~~118~~ 30, which is positioned on the trailing face 114 near the disk opposing face 110.

[029] The waveguide ~~126~~ 38 may be fabricated from any material known in the art capable of transmitting or conducting the laser beam from the laser source to a position near the write portion of the transducing head. The waveguide ~~126~~ 38 is sized and shaped in any manner known in the art to conduct the laser beam effectively. The waveguide ~~126~~ 38 may be constructed from one material or from multiple materials. The waveguide ~~126~~ 38 can include one or more condensing or transducing elements to assist in directing the light to the write gap to effectively heat the magnetic media.

[030] FIGS. 6-8 show various head/gimbal or load beam assemblies for mounting or coupling a laser source to the disclosed waveguide. FIG. 6 is a perspective view of a head/gimbal assembly 120, according to one embodiment of the present invention. As shown in FIG. 6, the head/gimbal assembly 120 includes a gimbal or flexure 18, ~~a~~ the slider 104, and ~~a~~ the laser 106. The assembly 120 can be mounted to any load beam known in the art. The laser 106, in the embodiment shown in FIG. 6, is butt coupled to the slider 104 in the manner discussed above with reference to FIG. 5A. As shown, the laser 106 is thermally-coupled to a tab 122, which extends upwardly from the flexure 18.

[033] FIG. 7 is a perspective view of a head/gimbal assembly 130, according to another embodiment of the present invention. As shown in FIG. 7, the head/gimbal assembly 130 includes a gimbal or flexure 132, a slider 134, and a laser source 136. The assembly 130 can be mounted to any load beam known in the art. As shown in FIG. 7, the assembly 130 further includes one or more tabs 138 projecting upward from the flexure 132. The tabs 138 may be integrally formed from the flexure 132 or may be coupled to the flexure 132. The embodiment shown in FIG. ~~5~~ 7 includes four heat transfer surface to accomplish cooling of the laser source 136. In the embodiment of FIG. ~~5~~ 7, the beam from the laser source 136 is turned ninety-degrees, using any known technique, to direct the beam in a direction generally perpendicular to the major plane of the slider 134. For example, a forty-five degree mirror 139 could be positioned between the output of the laser and the input of the waveguide.

[035] As shown in FIGS. 8A and 8B, the slider 140 includes a slider base 148 and a top 150. A focusing ball 152 is located adjacent a distal end of the optical fiber 146 and focuses light exiting the optical fiber 146 toward a forty-five degree coupling surface or mirror 154. The coupling mirror 154 directs the light beam 156 into the entrance to the waveguide 38. Again, the entrance to the waveguide 38 includes an optical grading that collect light and focuses it along the waveguide 38. This structure is also commonly referred to as a silicon optical bench.